

of the canceled claims in related patent applications. Claims 12, 14, 17 to 20, 22, and 24 have been amended to more particularly point out and distinctly claim that which Applicants regard as the invention. Upon entry of the above-made amendments, claims 12 to 24 will be pending.

Claims 12, 17, 20, and 24 have been amended to delete the recitation of "in a reaction".

Claims 14 and 15 have been amended to delete the recitation of "positive control" and instead recite "a component" that is known to interact with AR-NOX. Support is found in the specification on page 15, lines 13 to 15 and page 19, lines 1 to 2.

Claims 17 and 18 have been amended to recite a substrate that generates reactive oxygen species. Support is found in the specification on page 14, lines 9 to 13.

Claims 12, 17, 20, and 24 have been amended to substitute the recitation of a test compound with a test agent. Support is found in the specification on page 15, lines 21 to 23.

Claim 19 has been amended to recite the detection of cytochrome c is measured by comparing spectrophotometric absorbance at about 540 nm to 550 nm in the presence of said test agent to the spectrophotometric absorbance at about 540 nm to 550 nm in the absence of said test agent. Support is found in the specification on page 14, lines 9 to 14.

Claim 21 has been amended to recite that the substrate reduced by AR-NOX is an ascorbate radical.

Claim 22 has been amended to recite the detection of ascorbate radical is measured by comparing spectrophotometric absorbance at about 265 nm in the presence of said test agent to the spectrophotometric absorbance at about 265 nm in the absence of said test agent. Support is found in the specification on page 14, lines 15 to 20.

Claim 23 has been amended to recite that the substrate reduced by AR-NOX is NAD<sup>+</sup>.

A marked up version of the claims showing the amendments made is attached as Exhibit C and a copy of the claims that will be pending upon entry of the present amendments is attached as Exhibit D.

Applicants submit that the amendments to the claims are for clarity and should not be construed as amendments affecting patentability under *Festo Corp. v. Shoketsu*

*Kinzoku Kogyo Kabushiki Co.* 234 F.3d 558, 56 U.S.P.Q.2d 1865 (Fed. Cir. 2000) (*en banc*).

Applicants submit that the above-made amendments are fully supported in the instant application as originally filed, and do not constitute new matter. Applicants respectfully request that the above-made amendments be entered into the file history of the instant application.

**THE REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH,  
SHOULD BE WITHDRAWN**

The Examiner has rejected claims 12, 14, 17 to 20, 22, and 24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Examiner alleges that the phrase “incubating in a reaction comprising . . . AR-NOX” in claims 12, 17, 20, and 24 is vague and indefinite. In response, Applicants have amended claims 12, 17, 20, and 24 to delete the recitation of “in a reaction”.

The Examiner contends that the phrase “positive control” in claim 14 is vague and indefinite. In response, claim 14 has been delete the recitation of “positive control” and instead recite “a component” that is known to interact with AR-NOX. Claim 15 has also been amended to delete the recitation of “positive control” for correct antecedent basis.

The Examiner alleges that the phrase “capable of” in claims 17 and 18 is vague and indefinite. In response, claims 17 and 18 have been reworded to recite a substrate that generates reactive oxygen species.

The Examiner contends that the phrases “test agent” and “test compound” in claims 12, 17, 20, and 24 are vague and indefinite. Applicants respectfully disagree and respectfully submit that the phrases “test agent” and “test compound” are well known to one of ordinary skill in the art.

Applicants have amended claims 12, 17, 20, and 24 to recite “test agent” instead of “test compound” for consistency. Thus, the following discussion as to reasons why the phrases “test agent” and “test compound” are definite pertains only to the recitation of “test agent”. Applicants respectfully direct the Examiner to page 15, lines 10 to 13 of the specification, which recite that the invention relates to “methods for screening for agents which target AR-NOX” (emphasis added) and that “several types of methods are likely to be particularly convenient and/or useful for screening test agents” (emphasis added). It is well

known to one of ordinary skill in the art that a test agent is a chemical substance that may be involved in causing a change and thus, needs to be tested. In this case, the recitation of “test agent” refers to chemical substances that may be involved in targeting AR-NOX. The presently claimed invention pertains to methods for screening test agents in order to identify specific agents that interact with AR-NOX. As support for the art-accepted use of test agent, Applicants submit concurrently herewith as Exhibit E a copy of pages 25 and 1401 of the American Heritage College Dictionary, 3<sup>rd</sup> Edition. Applicants respectfully direct the Examiner to the fourth definition of “agent” on page 25 of Exhibit E, which defines an agent as “a force or substance that causes a change: *a chemical agent*”. Applicants also direct the Examiner’s attention to the fourth definition of “test” on page 1401 of Exhibit E, which defines test as a “physical or chemical change by which a substance may be detected or its properties ascertained” or a “reagent used to cause or promote such a change”. By combining the definitions of test and agent, “test agent” can be defined as a physical or chemical change by which a force or substance that causes a change may be detected or its properties ascertained. Thus, Applicants respectfully submit that “test agent” is not vague or indefinite. Instead, Applicants content that use of “test agent” in the specification coupled with an art-accepted definition of “test” and “agent” is definite.

The Examiner alleges that claims 19 and 22 are vague and indefinite. In response, claim 19 has been amended to recite that the detection of cytochrome c is measured by comparing spectrophotometric absorbance at about 540 nm to 550 nm in the presence of said test agent to the spectrophotometric absorbance at about 540 nm to 550 nm in the absence of said test agent. Similarly, claim 22 has been amended to recite that the detection of ascorbate radical is measured by comparing spectrophotometric absorbance at about 265 nm in the presence of said test agent to the spectrophotometric absorbance at about 265 nm in the absence of said test agent.

Accordingly, Applicants respectfully submit that the Examiner’s rejection under 35 U.S.C. § 112, second paragraph, has been overcome and/or obviated and respectfully request that the rejection be withdrawn.

**THE REJECTION UNDER 35 U.S.C. § 103(a),**  
**SHOULD BE WITHDRAWN**

The Examiner has rejected claims 12 to 24 under 35 U.S.C. § 103(a) as being

unpatentable over Morré et al. (U.S. Patent No. 5,569,673, hereinafter “the ‘673 patent”) in view of Morré et al. (BioFactors 9, which was submitted as Reference CF on July 27, 2000, hereinafter “BioFactors”). The Examiner alleges that the ‘673 patent teaches a method for determining neoplasia in a mammalian host comprising detecting the presence of an NADH oxidase associated with neoplastic cells as compared to a different NADH oxidase associated with normal cells, but that the ‘673 patent fails to teach screening for agents that sequester AR-NOX. The Examiner contends that BioFactors teaches a multifunctional NADH oxidase with protein disulfide thiol interchange activity associated with the plasma membrane and that superoxide dismutation inhibitable reduction of cytochrome c is assumed to be due to the cell surface NADH oxidase.

Applicants respectfully traverse the rejection. Applicant respectfully submits that this rejection should be withdrawn in light of the remarks below, and the Declaration of Dorothy M. Morré and D. James Morré Under 37 C.F.R. § 1.132 (hereinafter “Declaration”) submitted herewith to remove BioFactors as prior art.

In response, Applicant points out that BioFactors is the Applicant's own work and that it was published on June 16, 1999, which is within one year of the effective filing date of the present application. Applicant contends that BioFactors is not available as prior art for any purpose under 35 U.S.C. § 102 or § 103. To support this contention, Applicant provides herewith the Declaration as evidence that BioFactors is the inventor's own work, the publication of which occurred less than one year prior to the effective filing date of the present application. *In re Katz*, 687 F.2d 450, 215 U.S.P.Q. 14 (C.C.P.A. 1982).

In the Declaration, Dorothy M. Morré and D. James Morré state that they are the inventors of the claimed invention, and that the co-author of BioFactors (*i.e.*, Rhea Pogue) conducted experiments pursuant to their design under their supervision. She made no inventive contribution to the present application. Carrying out the inventor's instructions using normal skill or providing publically available materials is not an inventive contribution. *Sewall v. Walters*, 21 F.3d 411, 416 (Fed. Cir. 1994). Accordingly, Dorothy M. Morré and D. James Morré are the only inventors of the subject matter claimed in the present application and disclosed in BioFactors, and BioFactors is the inventor's own work. Thus, BioFactors is not available as prior art against the present application.

Accordingly, Applicants respectfully submit the Examiner's rejection under 35 U.S.C. § 103(a) has been obviated and respectfully request that the rejection be withdrawn.

CONCLUSION

Applicants respectfully request entry of the foregoing amendments and remarks into the file history of the above-identified application. Applicants believe that each ground for rejection or objection has been successfully overcome or obviated, and that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and objections, and allowance of the application are respectfully requested.

Respectfully submitted,

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Enclosures